

EXECUTIVE SUMMARY

California state government's sustainable building initiatives and programs clearly place the state at the forefront of the nation's green building movement. The state's leadership is evidenced by a diverse range of policy and program accomplishments, including the construction of the nation's first LEED Gold state owned office building; groundbreaking research showing that sustainable building is a cost-effective financial investment; the construction of the 10th University of California campus in Merced that will ultimately be the greenest campus in the world; the adoption by the UC Board of Regents of a systemwide *Green Building Policy and Clean Building Standard*, which will revolutionize the way the University builds buildings; and the construction of high performance K-12 schools with state school construction bond funds.

Sustainable buildings use key resources like energy, water, materials, and land much more efficiently than buildings that are simply built to code. They create healthier work, learning, and living environments, with more natural light and cleaner air, and are cost effective -- saving taxpayer money. Investing in appropriate sustainable features on the front end of construction, such as dimmable lights and high efficiency HVAC systems, pays off during the life of the building, often many times over.

Two Executive Orders, issued by Governor Davis, launched California on the sustainable building road.

- Executive Order D-16-00, signed in August 2000, establishes the Governor's sustainable building goal: "to site, design, deconstruct, construct, renovate, operate, and maintain state buildings that are models of energy, water and materials efficiency; while providing healthy, productive and comfortable indoor environment and long-term benefits to Californians." ⁱ
- Executive Order D-46-01, signed in October 2001, provides guidance on the process the Department of General Services will use to locate and lease space, including such considerations as proximity to public transit and affordable housing; preserving structures of historic, cultural, and architectural significance; opportunities for economic renewal; and sensitivity to neighborhood and community concerns. ⁱⁱ

To help implement the Governor's sustainable building goals, the Secretary of the State and Consumer Services Agency, Aileen Adams, established the Sustainable Building Task Force (SBTF), a unique partnership of more than 40 governmental agencies. Members include the California Integrated Waste Management Board, the California Energy Commission, the Department of Health Services, the Department of General Services, the Air Resources Board, the University of California, the Community College system, and the Department

of Finance. Over the past several years, this group has worked to use its combined building, environmental, and fiscal expertise to integrate sustainable building into the state's capital outlay program, including several nationally recognized projects.

Building Better Buildings: An Update on State Sustainable Building Initiatives (Blueprint 2003) is the first in a series of progress reports on the state's sustainable building efforts. Specifically, the report highlights notable policy and program achievements; describes key Task Force partnerships; provides an in-depth look at several significant sustainable building projects; and details Task Force goals for the coming years.

Some of the Task Force's most significant accomplishments over the last two years include:

- Over \$2 billion of current state contracts for capital outlay design and construction projects now include energy efficiency and sustainable building performance criteria.
- The Education Headquarters Building (Block 225) of the Capitol Area East End Complex became the first state government owned building in the nation to receive the distinguished Leadership in Energy and Environmental Design (LEED) Gold Award from the US Green Building Council in January 2003.
- The pioneering economic analysis report, *The Costs and Financial Benefits of Green Buildings*, indicates that investing an additional 0 to 2% of a building's construction costs in sustainable building design measures upfront results in savings of 20% or more of those construction costs over the building's lifetime (assumed, conservatively, to be 20 years). In other words, an initial upfront investment of up to \$100,000 to incorporate green building features into a \$5 million project would result in a savings of \$1 million (in today's dollars) over the life of the building. This report, which has attracted national interest, is scheduled for release in October 2003.
- Last year the average energy use in state buildings was reduced by 20%. In particular, energy efficiency at the five building Capitol Area East End Complex exceeds Title 24 energy requirements by over 30% (42% at the Block 225 Education Building), resulting in nearly \$500,000 in energy savings annually. Other operations and maintenance best practices in state facilities focus on environmentally friendly cleaning product standards, building material emissions testing, and integrated pest management.
- An acre (50,000 square feet) of photovoltaic panels, the largest rooftop array on any state building, at the Franchise Tax Board Butterfield State Office Building, supplies nearly a half a megawatt (470 kWp) of electricity. This is enough electricity to power more than 400 homes in the Sacramento area.

- The University of California Board of Regents, with significant input from the Task Force, adopted a landmark, system-wide *Green Building Policy and Clean Energy Standard* to guide new construction and major renovation projects on the 10 UC campuses. This policy will impact over 20 million square feet of space slated for construction over the next ten years.
- The Chancellor of the University of California Merced, with support from the UC Merced “Red Team” chaired by the Secretary of the State and Consumer Services Agency, established a goal to construct the greenest campus in the country with an initial target of LEED Silver for all construction.
- Over 150 representatives from the public, private and non-profit sectors attended the UC Merced “Conference on Building and Operating Sustainable College Campuses in the 21st Century”. The conference was planned in large part by members of the Sustainable Building Task Force and supported by a grant from the U.S. Environmental Protection Agency.
- Thirteen high performance demonstration schools under construction throughout the state serve as models for the integration of high performance features into \$15 billion of bond funded school construction projects statewide.
- Five school districts in California, including the Los Angeles Unified School District, have adopted the high performance school construction guidelines established in the Collaborative for High Performance Schools (CHPS) *Best Practices Manual*. This Manual serves as a national model for high performance school construction and has also been adapted for use by the Federal Department of Energy and the State of Massachusetts.
- The Office of Library Construction included sustainable building design questions in bond funding applications for over \$130 million library construction dollars allocated during the first round of funding. Eight library projects, approved during the first funding cycle, will pursue LEED certification.
- The Division of the State Architect launched the Sustainable Schools Website to provide a comprehensive clearinghouse on sustainable school construction issues.
- A *Sustainable Facilities* category was added to the 2003 Governor’s Environment and Economic Leadership Awards, the most prestigious environmental award given by the state.
- The USC Marshall School of Business Women’s Leadership Board, a group of undergraduate students (both men and women), worked with the SBTF to develop a business school case study on the organizational process the SCSA used to integrate sustainability into the capital outlay process.
- The Department of General Services established a standard for the use of environmentally preferable cleaning products in state buildings.

Even with these major accomplishments, California's path to sustainability is paved with policy considerations and program issues that still need to be addressed. Targets for the coming years include:

- Obtaining a cost-effective LEED Silver level or higher for major state projects;
- Encouraging all school construction projects to use the Collaborative for High Performance Schools criteria to ensure that bond funds are spent wisely on schools that will stand the test of time;
- Publishing and implementing recommendations developed in the economic analysis report, *The Costs and Financial Benefits of Green Buildings*;
- Working to incorporate in statute the sustainable building policies and programs implemented through Executive Order D-16-00;
- Developing recommendations to establish renewable energy and green power standards for state projects;
- Integrating "total building" commissioning and facility performance evaluations as standard Department of General Services policy for all new construction, infrastructure, and rehabilitation projects to ensure that state buildings continue to operate as designed over time; and
- Adopting performance guidelines to incorporate environmentally friendly practices into facility operations and maintenance.

As we move forward to pursue these and other goals, the Sustainable Building Task Force remains steadfastly committed to improving the state's building process one step at a time, ever mindful of John Muir's observation that:

"WHEN ONE TUGS AT A SINGLE THING IN NATURE, (S)HE FINDS IT ATTACHED TO THE REST OF THE WORLD."

ⁱ State of California, Executive Department. *Executive Order D-16-00*. August 2000. Available at: http://www.governor.ca.gov/state/govsite/gov_pressroom_main.jsp.

ⁱⁱ State of California, Executive Department. *Executive Order D-46-01*. October 2001. Available at: http://www.governor.ca.gov/state/govsite/gov_homepage.jsp.